PROACTIVE DMSMS:

Part of Integrated Systems Engineering & Life Cycle Product Support Planning

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OVERVIEW

CHALLENGES:

- Challenges that set the stage for change

DIRECTING CHANGE:

- Meeting the challenges via leadership direction

IMPLEMENTING CHANGE:

- Overcoming the Challenges
- CECOM Life Cycle Sustainment Initiatives

CHALLENGES: OPERATIONAL EFFECTS


DOWNSIZING

DIMINISHING MANUFACTURING & MATERIAL SHORTAGES

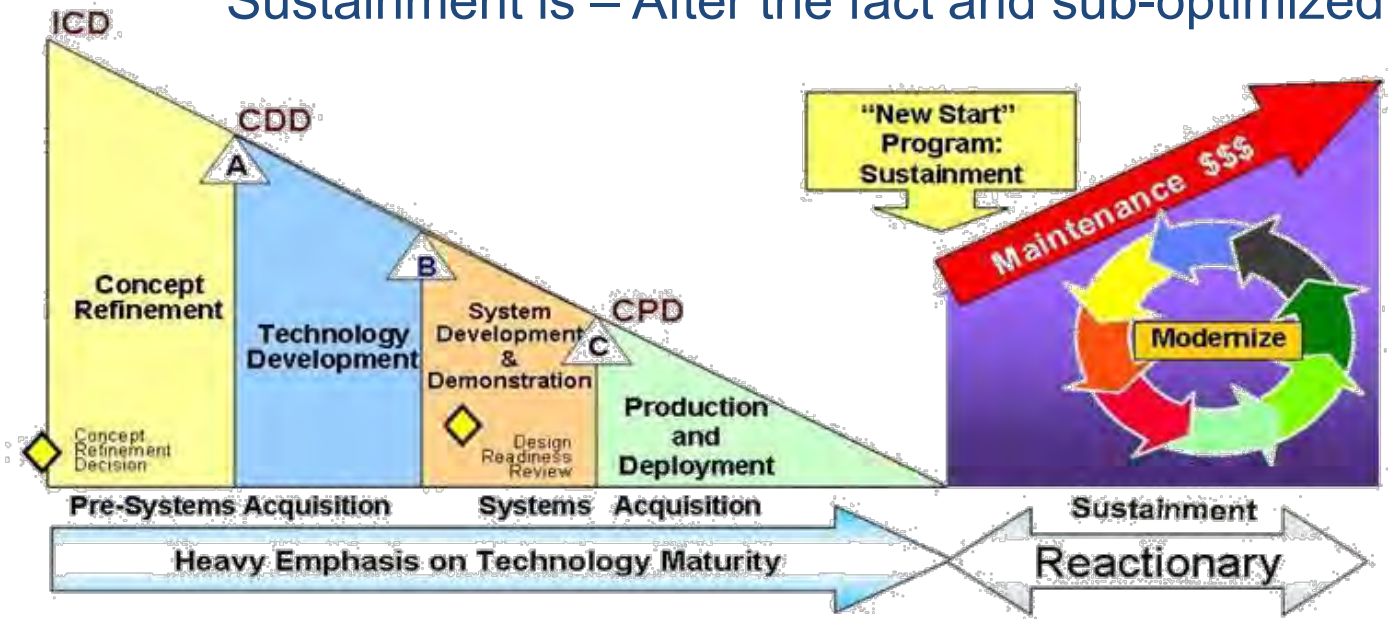

SUB-OPTIMAL MATERIEL


UNSAFE PRACTICES

STRATEGIC CHALLENGES

The Key Disconnect between Acquisition & Sustainment

Sustainment is – After the fact and sub-optimized



OSD Memo 6/30/2010

Type System	RDT&E	Procurement	Operations & Sustainment
Fixed Wing Fighters	9%	30%	62%
Ground Systems	4%	24%	73%
Rotary Wing	6%	29%	64%
Surface Ships	1%	31%	68%

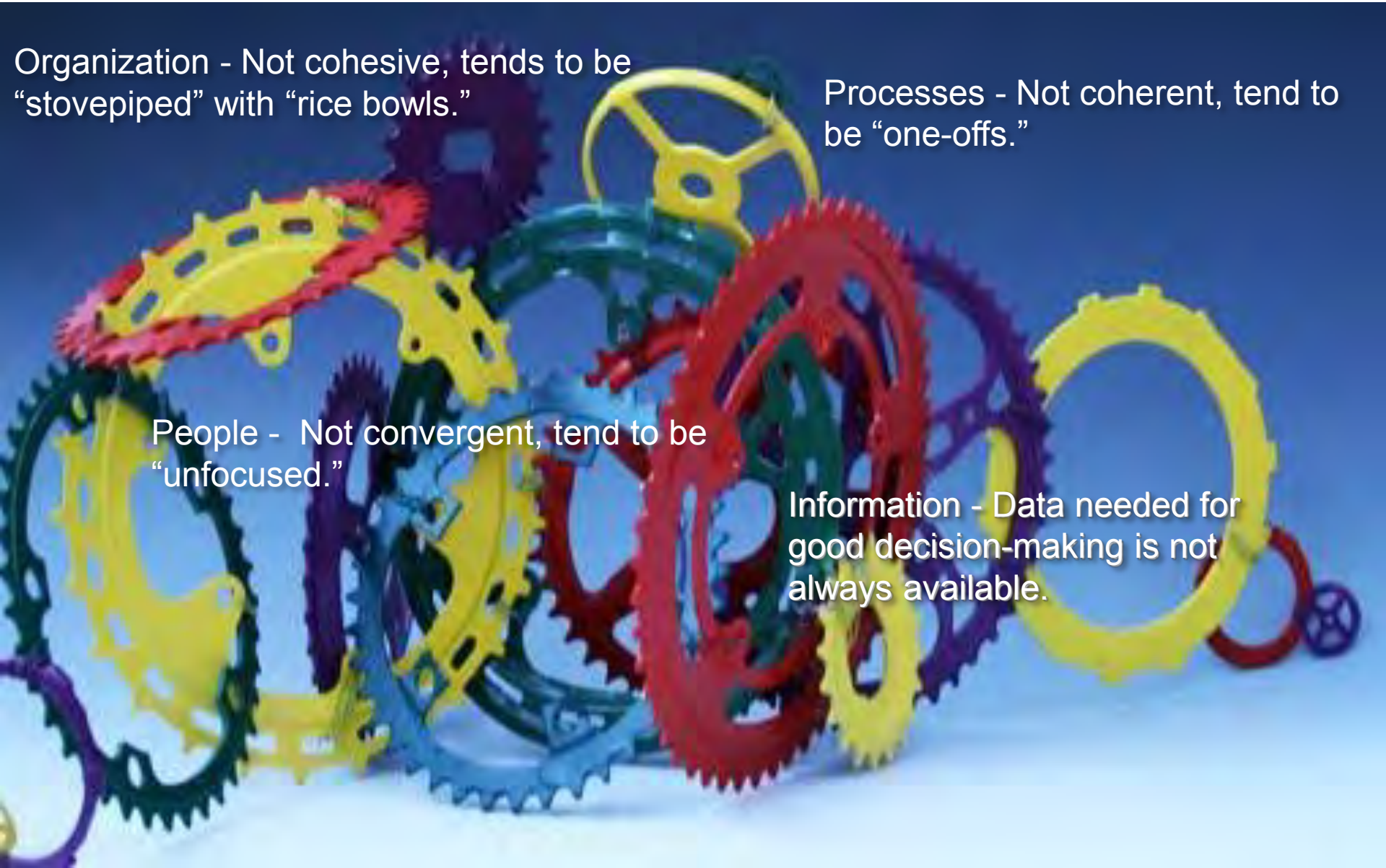
TACTICAL CHALLENGES

ARMY FORCE GENERATION

- ARFORGEN is a training and readiness strategy that drives institutional functions.
- ARFORGEN adapts Institutional Army and guides Army Business Transformation

Unit Set Fielding (USF) has been recognized across the Army as the premier methodology for delivering C4ISR Capabilities to the force. The 5-phase process is carefully synchronized with all phases of the ARFORGEN process. PEO C3T manages phases 1-3 and CECOM LCMC's Logistics Readiness Center manages Phases 4-5.

ORGANIZATIONAL CHALLENGES
Processes, Tools, People



Organization - Not cohesive, tends to be "stovepiped" with "rice bowls."

Processes - Not coherent, tend to be "one-offs."

People - Not convergent, tend to be "unfocused."

Information - Data needed for good decision-making is not always available.

DMSMS CHALLENGES

- **There are limitations on SD 22 utility**
  - Little guidance on DMSMS activities needed to implement the best practices
    - What to do
    - How to do it
  - Little guidance on timing of desired DMSMS outcomes
  - Little guidance on DMSMS best practices during design and development

	Materiel Solution Analysis	A	Technology Development	B	Engineering & Manufacturing Development	C	Production & Deployment	Operations & Support
Technology Maturity	5: Component validation		6: Systems/ subsystems demonstration		7: System prototype at planned operational system.		8: System qualified through test and demonstration.	9: System proven through successful mission operations.
Sustainment Maturity	Weapon Sys History Industrial Capability Assess Initial Support Strategy Integrate Concept Team		Support Analysis Core Log Assess, LORA, Type I BCA Wpn Sys Support Mod. New Equip Train Plan, Obsol. & DMSMS Plan		Support Strategy, Core Depot Assess, SORA, Type II BCA Reliability Centered Maintenance, RAM, PPP		Sustainment Readiness Review, Depot Maint. Sup. Plan, PBL Program, Fielding, NET, SCOR	Sustainment Readiness Review+5, Life Cycle Cost Analysis, POM Planning, PBL / PPP

DIRECTING CHANGE: STRATEGIC

Policy and Guidance business process changes to increase effectiveness, efficiency, warfighter readiness and better value for the taxpayer:

DEC 2009: DUSD (AT&L) DTM 09-027, Weapon System Acquisition Reform Act
- Reform of Defense Acquisition Program

APR 2010: DUSD (AT&L) Memo, Strengthened Sustainment Governance for Acquisition Program Reviews
- Continuous detailed reviews of key elements of sustainment planning

OCT 2010: DUSD (AT&L) 10-015, Requirements for Life Cycle Management and Product Support
- Requires a Product Support Manager for every ACAT I & II Program

SEP 2010: DUSD (AT&L) Memo, Better Buying Power: Gaining Better Efficiency & Productivity in Defense Spending
- Change business practices to improve procurement and sustainment of critical goods and services

MAR 2011: SEC Army Memo, Optimization of Materiel Development and Sustainment
- Optimize PEO and AMC responsibilities to improve agility and reduce overlaps and redundancies

MAR 2011: DUSD (AT&L) DTM 11-003, Reliability Analysis, Planning, Tracking, and Reporting
- Formulation of a comprehensive reliability and maintainability (R&M) program using an appropriate reliability growth strategy

MAR 2011: SEC Army Directive, Designation of AMC as the Lead Materiel Integrator
- need for a new approach to materiel management Army-wide

MAR 2011: OSD Integrated Product Support Guidebook (Draft)
- Plan, manage, and fund weapon system product support across all Integrated Product Support 821 (IPS) Elements

APR 2011: OSD L & MR, Product Support Manager Guidebook
- An operating guide to assist the PSM and the Acquisition Community with the implementation of next-generation product support strategies.

APR 2011: OSD L & MR, Product Support Business Case Analysis Guidebook
- Provides overall guidance, best practices and methodologies for conducting a Product Support BCA

APR 2011: OSD Memo: Joint Memo on Savings Related to "Should Costs"
- Ensure that PMs drive productivity improvements from contract negotiations through program execution to sustainment

"MORE TO COME"

DIRECTING CHANGE: STRATEGIC cont'd

Product Support Business Model

Define the overall strategy that drives cost-effective performance and capability for the Warfighter across the weapon system life cycle and enables most advantageous use of an integrated defense industrial base

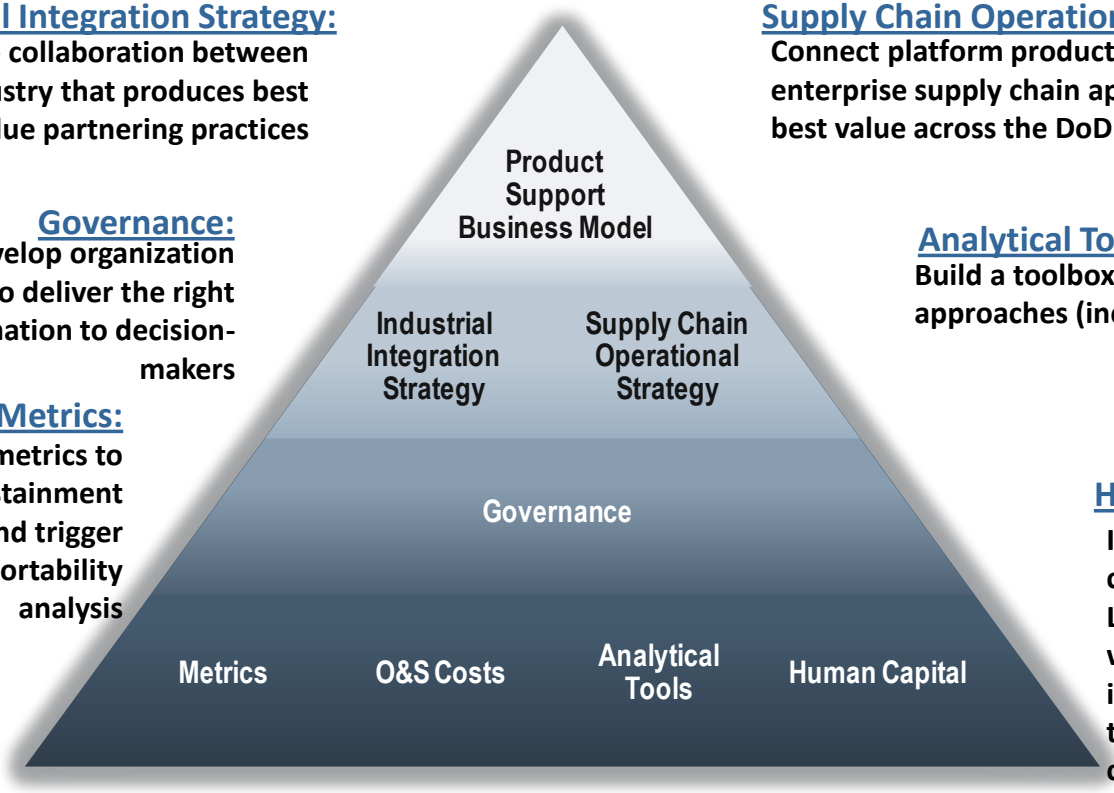
Industrial Integration Strategy:
Align and expand the collaboration between Government & Industry that produces best value partnering practices

Supply Chain Operational Strategy:
Connect platform product support strategies to enterprise supply chain approaches that produces best value across the DoD components

Governance:
Strengthen and develop organization and mgmt processes to deliver the right sustainment information to decision-makers

Analytical Tools:
Build a toolbox of analytical approaches (including BCA)

Metrics:
Use existing metrics to catalyze sustainment strategies and trigger continuous supportability analysis



Human Capital:
Integrate Product Support competencies across the Logistics and Acquisition workforce domain to institutionalize successful traits of an outcome-based culture

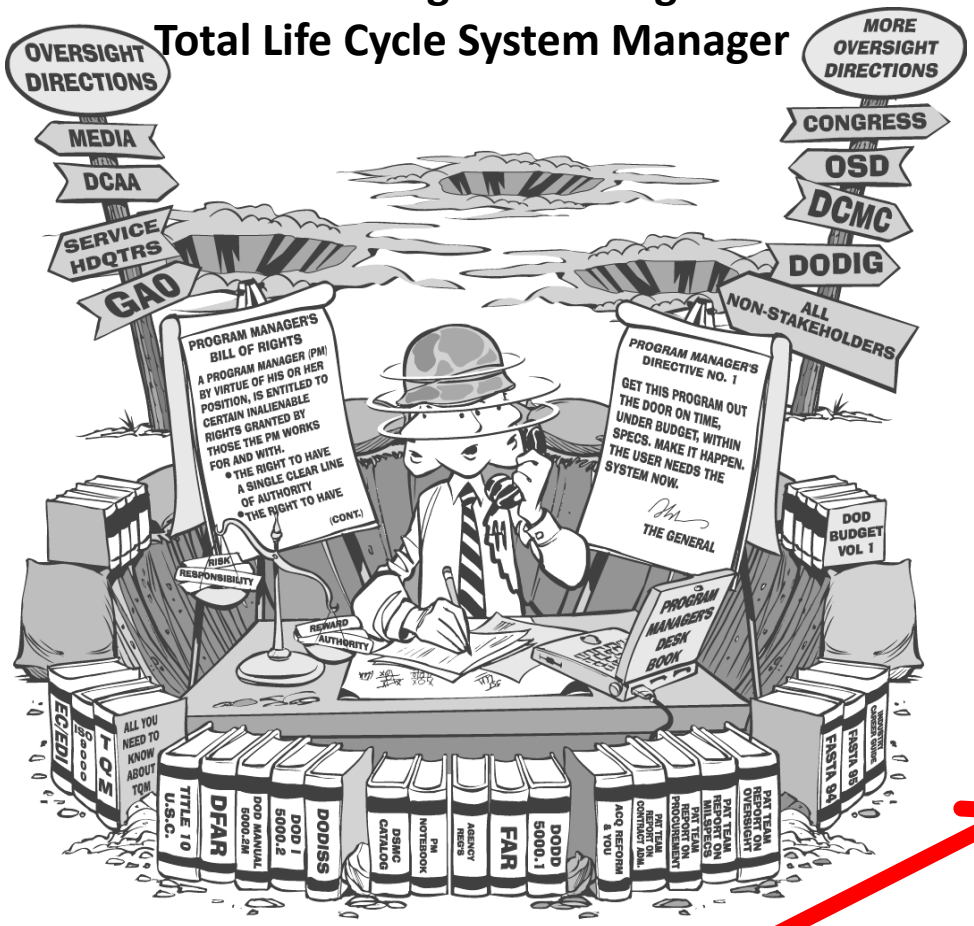
O&S Costs:
Improve O&S cost visibility and influence

Weapons System Data:

Define, collect, report, and manage the data we need to drive effective Life Cycle Product Support

DIRECTING CHANGE: TACTICAL

While the Program Manager is the Total Life Cycle System Manager

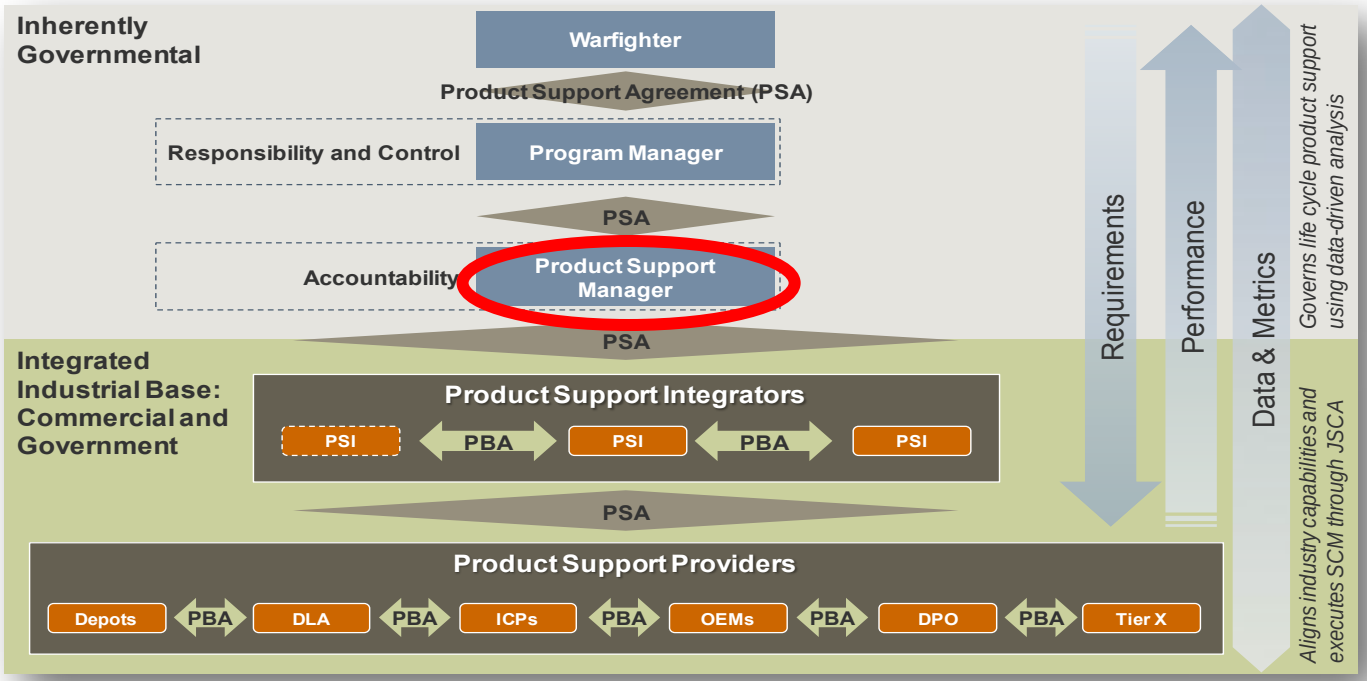


The Target has Moved

Product Support Manager

DIRECTING CHANGE: TACTICAL

Product Support Management

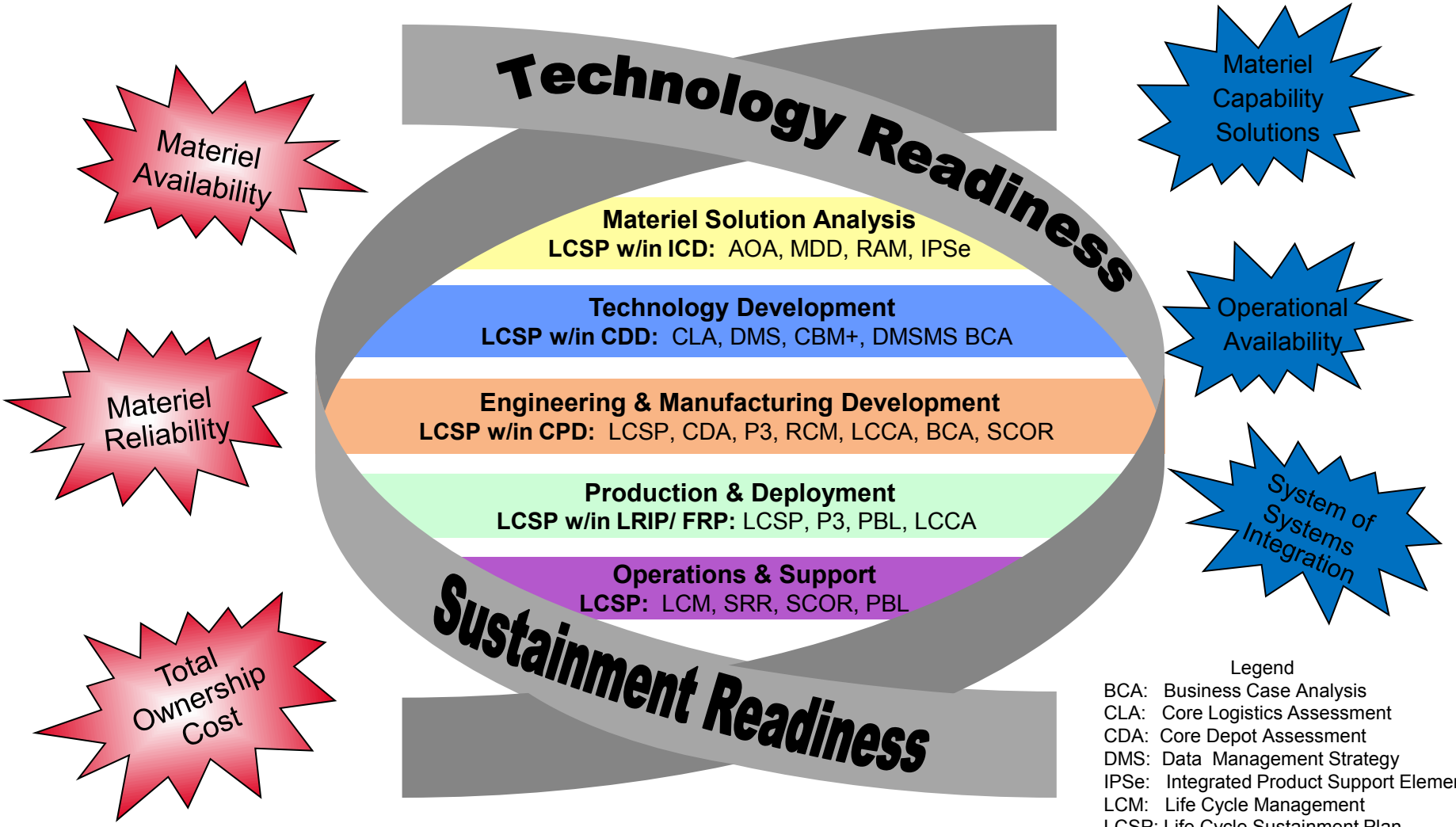


PSM within every ACAT I/II program by 4 APR 2011:

- **Full Time DoD Employee, Key Leadership Position, Gov't Performance of Critical Acquisition Functions**
- **Develop and implement a comprehensive product support strategy**
- **Conduct appropriate cost analyses to validate the product support strategy, LCSP and BCA**
- **Assure achievement of desired product support outcomes through product support arrangements (PBL)**
- **Optimize implementation of the product support strategy (i.e. balance warfighter effectiveness and affordability - PBL)**
- **Periodically review product support arrangements between PSIs and PSPs for consistency with the overall product support strategy**
- **Revalidate the BCA / product support strategy every five years.**

IMPLEMENTING CHANGE:

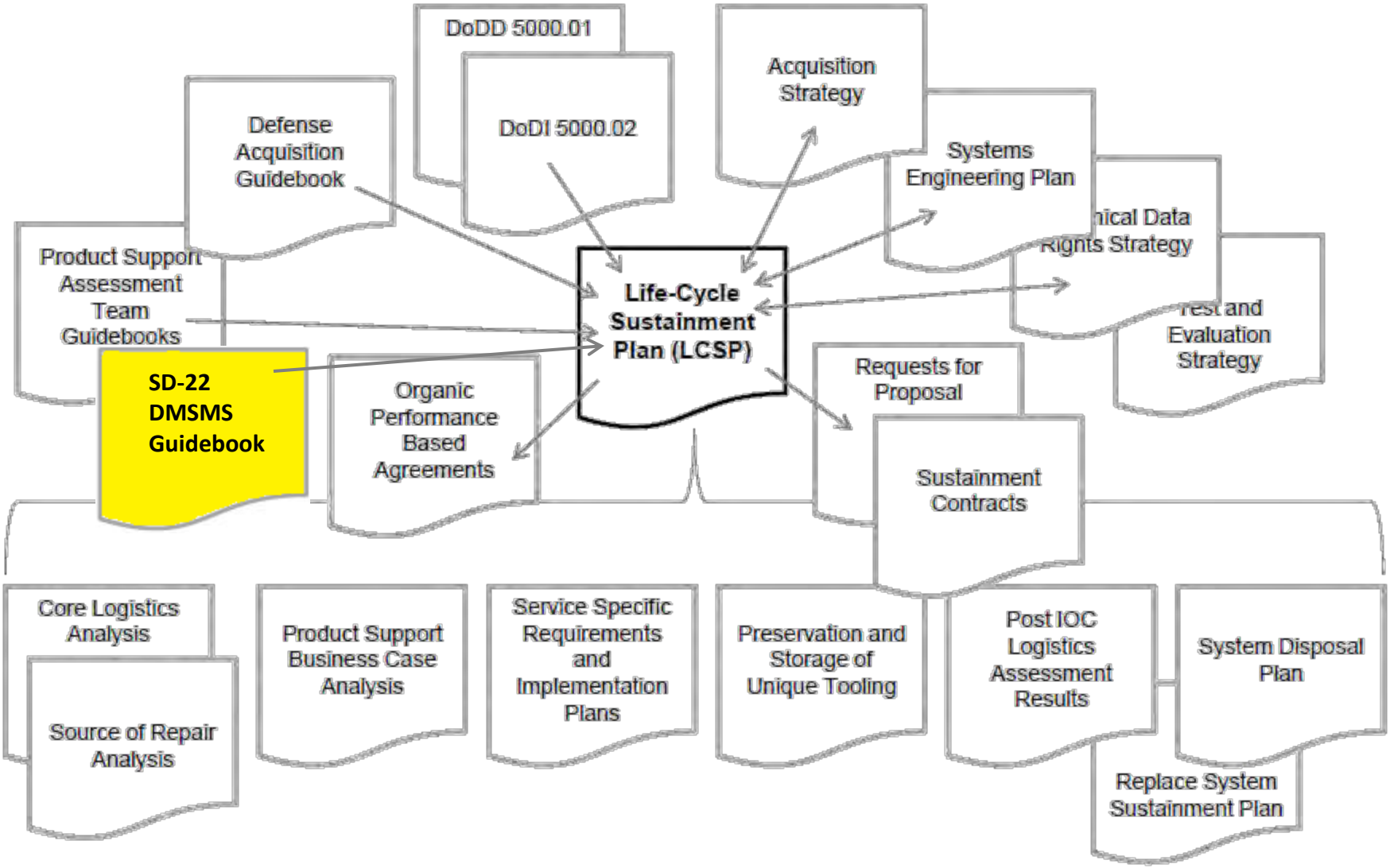
Understanding the A,T & L "Genetic Code"



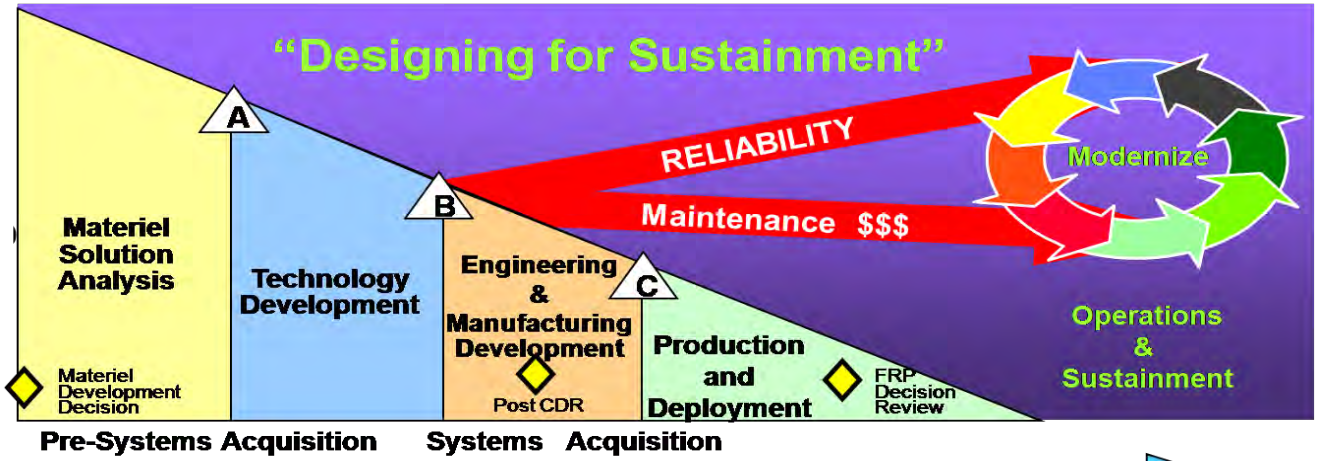
Legend

BCA: Business Case Analysis
CLA: Core Logistics Assessment
CDA: Core Depot Assessment
DMS: Data Management Strategy
IPSe: Integrated Product Support Elements
LCM: Life Cycle Management
LCSP: Life Cycle Sustainment Plan
LCCE: Life Cycle Cost Analysis
P3: Public/Private Partnering
PBL: Performance Based Logistics
RAM: Reliability, Availability, Maintainability
SRR: Sustainment Readiness Review

IMPLEMENTING CHANGE: STRATEGIC
Product Support Policies



IMPLEMENTING CHANGE: Tactical



Seamless Systems Engineering and Lifecycle Management Planning

Where does DMSMS fit as part of Life Cycle Sustainment Planning?

Warfighter Requirements

- Capabilities Development Document (CDD)
- CostAnalysis Requirements Description (CARD)
- Others

Product Support Life Cycle Outcomes

Product Support Cost (CAIG + Investment Costs)

Integrated Product Support Elements	SRL 1	SRL 2	...	SRL 11	SRL 12
1. Product Support Management					
2. Design Interface					
3. Sustaining Engineering					
4. Supply Support					
5. Maintenance Planning and Management					
6. Packaging, Handling, Storage, and Transportation					
7. Technical Data					
8. Support Equipment					
9. Training and Training Support					
10. Manpower and Personnel					
11. Facilities and Infrastructure					
12. Computer Resources					

LCSP

Warfighter Outcomes

- Reliability
- Availability
- Maintainability
- Total Ownership Cost

Product support performance reported via:

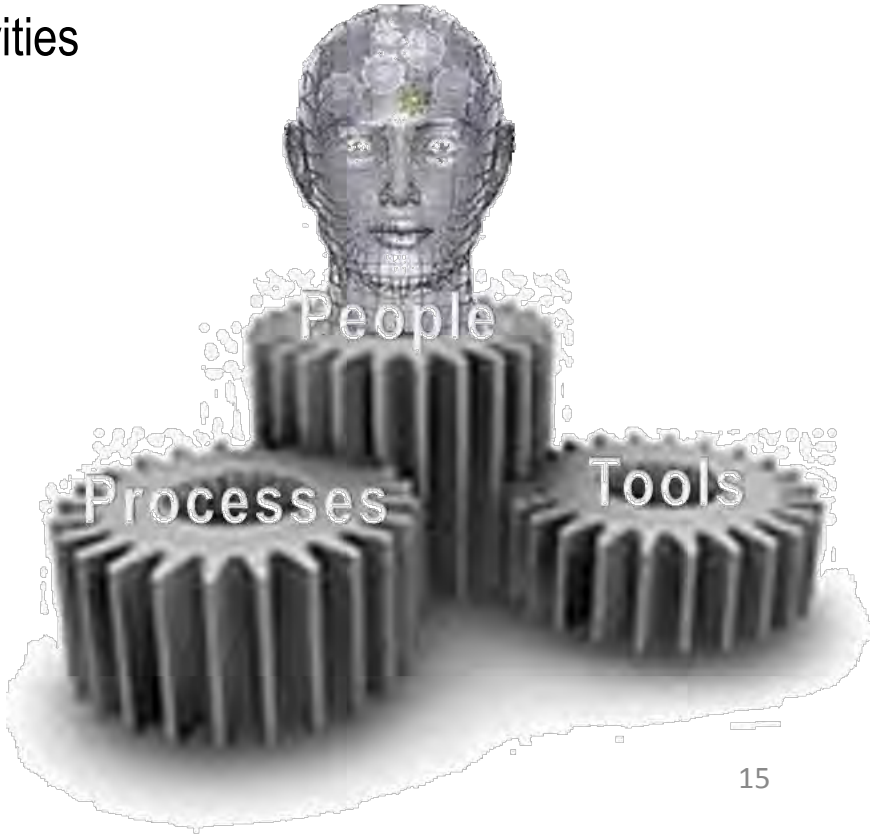
- DRRS
- Others

LCSP validated by:

- ILA
- Sustainment Chart
- Metrics (JSCA)

DIRECTING CHANGE: UPDATE SD-22

- DMSMS as part of Integrated Product Support
  - Define the Criticality of DMSMS as a sustainment planning function within acquisition
  - Develop Standard Operating Procedures (SOPs) to optimize capability, visibility, governance and reduce costs
- Develop SD-22 into a supporting Guide to the OSD Product Support Manager Guide Book
  - Further definition applied to the 12 new OSD Integrated Product Support Elements (IPS)
  - Tie in to the new OSD Business Case Analysis Guide Book??
- Provide separate section on tools/analytics and their applicability
- Create index for rapid location of common activities
  - Business case development
  - Metrics
  - DMSMS plan development
  - Others??



SD-22 Recommendations: Processes

- **Amplify on DMSMS content in other policy and guidance documents, e.g.,**
  - OSD Product Support Management Guide
    - Life-Cycle Sustainment Plan
  - IPS Element Guide (under Sustaining Engineering IPS)
  - Product support activities
    - Product support management
    - Design interface
    - Sustaining engineering
    - Supply support
  - 5000.02 Acquisition Policy
    - As part of acquisition strategy and planning
  - Defense Acquisition Guidebook
  - Systems engineering technical review checklists (as described earlier)
  - Integrated logistics assessment checklists

SD-22 Recommendations: Tools

- Develop a Product Life Cycle Management Integrated Data Environment that allows us to optimize visibility and create ownership cost reduction opportunities
  - THIS NEEDS TO BE A NON-NEGOTIABLE OR WE RISK:
    - Work redundancy
    - Inefficient buying power
    - Reduced Mean Time To Repair (MTTR)
    - Inability to meet Materiel Readiness Req'ts

SD 22 Recommendations: People

- Working Group Direction: revise SD 22 to a more “How To” Guide with SOPs that both government and industry can utilize.
  - Need both Government & Industry
- Review OSD PSM, BCA, IPS Guides for insertion points of DMSMS Planning as part of the acquisition process.
- Form Sub-teams to go through that material to:
  - Draft a table of contents
  - Determine the sources of information needed to write the sections in the table of contents
  - Identify areas where more information is needed and suggest a process for obtaining the data
  - Estimate the amount of work involved
  - Present rewrite for approval to DOD DMSMS, DSPO, CAEs, DoD, OSD, others within the Chain of Command as required.

IMPLEMENTING CHANGE at CECOM:
Life-Cycle Sustainment Initiatives (LCSI)

Strategic Efforts in…

- **Processes**
  - IPS/PM Crosswalk
  - Data Management Strategies:
    - Joint Enterprise Product Life Cycle Management – Integrated Data Environment (ePLM-IDE) Pilot Program
  - Supply Chain Management
  - Industrial Base Planning
- **Tools**
  - Performance Based Product Support
  - Life-Cycle Analysis Capability
  - Condition Based Maintenance+
  - Knowledge Management
  -
- **People**
  - Integrated Product Support Strategic Plan
  - Human Capital Development Roadmap

U.S. ARMY CECOM
One Vision, One Mission - The Warfighter.

IMPLEMENTING CHANGE:

Team C4ISR Product Support Strategic Plan

PROCESS DRIVEN

- **Evaluate System Maturity:** from a *Sustainment Perspective*
- **Design for Sustainment:** Influence the design for better RAM-C at the beginning of Acquisition
- **Apply Life Cycle Logistics Engineering:** as a part of a totally integrated product support / systems engineering plan
- **Process Focused:** Develop performance outcomes with metrics that are monitorable and adjustable

ORG-COM Industrial Base

Customer

PEOPLE DRIVEN

- **Enterprise Focused:** Bring to bear the full expertise of the CERDEC, LRC, SEC, ISEC, and TYAD for making informed LCM decisions.
- **Collaboration on:** managing sustainment strategies at the initial point of weapon system acquisition
- **Facilitate PB-Product Support:** to align organic/commercial core competencies
- **Utilization of Tools:** an enterprise Product Life cycle Management Integrated Data Environment

U.S. ARMY CECOM
One Vision, One Mission - The Warfighter.

It's All About: Processes, Tools & People

"Changing institutional bureaucracies is really hard. People make incremental change and think it's hard, but we've got to completely change how we're doing business."-- CSA **General George W. Casey, Jr.**